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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,376	03/16/2001	David Smith	0321.65200	6440

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EXAMINER

LEE, BENNY T

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 12/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

811376

Applicant(s)

Smith et al

Examiner

B. Lee

Group Art Unit

2817

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE Three (3) MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-43 is/are pending in the application.
Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-43 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☒ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☒ The drawing(s) filed on 16 March 2001 is/are objected to by the Examiner.
- ☒ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

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The disclosure is objected to because of the following informalities: Page 7, line 17, note that "^{lattice}~~lattice~~ spacing medium" should be rephrased for clarity. Page 11, line 25, note that "capacitor. A" should be separated for clarity. Page 17, line 2, note that for the following acronyms, such acronyms should be spelled out or defined: ~~NMR~~; ~~EPR~~; ~~CESR~~; ~~AFR~~; ~~FMR~~. Page 21, note that the scripted letter "~~r~~" is not consistent with the non-scripted letter used to define such parameter in the specification and should be clarified. Page 22, line 1, note that the acronym "~~MAFIA~~" should be spelled out or defined. Moreover, is such an acronym a registered trademark needing identification? Page 24, equations (6) and (7) should have parameters thereof respectively identified; in equation (7), note that the symbol "~~□~~" is vague in meaning. Page 25, line 22, note that "polarization, ~~17~~" should be separated. Page 27, line 11, note that "(1,0) (0, 1) and (1, 1) directions of incidence" is vague in meaning and needs clarification.

Appropriate correction is required.

The disclosure is objected to because of the following informalities: Note that the following reference labels need description in the specification: Fig. 5(a) (w, c, g, d); fig. 5(b) (x, y, z). *figs 7, 8 in their entirety*

Appropriate correction is required.

The drawings are objected to because in fig. 2(a), note that dimension --a-- needs to be labeled. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the array of resonators being "Swiss roll resonators" (cl 29) and "spiral resonators" (cl 30), respectively must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the scattering defect (cl 37) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The negative permittivity medium being "superconducting" (cl 2), and the substrate being a "piezo electric/magnetostriuctive" medium (cls 35/36), respectively are not disclosed in the specification. *only conduction media*

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are

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canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 17-23; 24-37; 38-44 been renumbered ~~16-22~~; ~~23-36~~; ~~37-43~~.

Claims 2, 12, ~~14~~⁵; 24, 25, 27, 28, 29 (renumbered); 43 (renumbered) are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims ~~2, 12, 15~~, note that reference to "left handed material/medium" properly be --array of elements" for a proper characterization?

In claim 43, (renumbered) note that "the adiabatic absorption" is not definite since such a feature has not been strictly defined.

The following claims have been found objectionable for reasons set forth below:

In claims ~~1, 23~~ (renumbered) note "for" should be rewritten as --define-- for a proper characterization.

In claim 23, (renumbered) note that --of said ~~array~~-- should follow "other elements" for a proper characterization. Also, note that "forming" should be rewritten as --providing-- for a proper characterization.

In claims ~~32, 33, 37~~, (renumbered) note that "formed" should be rewritten as --defined-- for a proper characterization.

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-15, renumbered ^{claims} 16-22; 23-36; 37-41; 42, 43 are rejected under 35 U.S.C. 102(b)

as being clearly anticipated by the Smith et al paper (cited by applicants').

Note that the Smith et al paper discloses applicants' claimed negative permittivity/permeability composite medium including the double loop split ring resonator cells (fig. 1) interlaced with conductive rods (e.g. figs. 2c, 2d).

Any inquiry concerning this communication should be directed to Benny Lee at telephone number (703) 308-4902.



BENNY T. LEE
PRIMARY EXAMINER
ART UNIT 2817

B LEE/pj

12/04/02